Legislative Branch Computer System Plan

A Report to the 55th Legislature
from the
Legislative Branch
Computer System Planning Council

October 1996

Prepared by
Montana Legislative Services Division
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INTRODUCTION

A Legislative Branch Computer System Plan is required by Title 5, chapter 11, part 4, Montana Code Annotated (MCA). The Legislative Branch Computer System Planning Council (Planning Council) has developed a plan in accordance with the requirements of that part. In addition, the Planning Council recognizes that a plan is necessary to direct the substantial investment in technology toward providing the maximum return and to best address the information needs of the Branch.

In developing the plan, the Planning Council recognized that planning is an active process. Publius Syrus said, "It is a bad plan that admits of no modification." (Bartlett's Familiar Quotations, 1980.) The Planning Council recognizes the plan as more a process than a product. As such, the plan also provides a process for continual evaluation, communication, and review, rather than a blueprint for a specific configuration of hardware and software.

Evaluation of existing and potential applications is both technical and managerial in nature. Recognizing this, the Planning Council relied, to a great extent, on the technical staff of the Legislative Branch to review existing systems and to recommend technological directions and solutions to identified problems. The Planning Council reviews and approves the recommendations of the Technical Planning Group (TPG) before Information Technology (IT) resources are expended.

This plan represents the collective vision, planning, actions, and achievements of both groups as well as each division in the Branch.

It should be noted that because of the Consumer Counsel's remoteness and separate and distinct mission, it has not been incorporated into this plan.

EXECUTIVE SUMMARY

The mission of the Legislative Branch is to provide a consolidated administrative structure to support the mission of the Legislature. The Legislature's mission is to exercise the legislative power of state government vested in the Legislature by The Constitution of the State of Montana. In order to carry out this mission, the Legislature depends on the collection, processing, and distribution of information to and from individual citizens, businesses, and organizations within the state. The tools of IT expedite and add both quantity and quality to the information collected by the Branch, as well as facilitating the analysis of that information and the subsequent distribution of the laws, policies, and conclusions of the legislative process.

In the past, IT has been successfully used by the Legislative Branch primarily to allow staff to respond more quickly to requests for information, to produce more complete fiscal and operational analyses, and to expedite and reduce the cost of information processing. Examples of these types of activities include the Bills Processing System, which allows quicker and more accurate processing of new and changed bill text, and the Montana Integrated Budget System (MIBS), which allows dramatically more fiscal review and analysis in much shorter time periods than was previously possible. (See Appendix E for more detail on the IT impact on staffing levels.)

More recently, IT has begun to be used effectively to improve both the collection of information from other government agencies and the dissemination of information to the public. For example, direct access to agency systems by the Legislative Audit Division staff has improved audit efficiency; access to a wide variety of information on the Internet has improved the research process; e-mail response by agencies to fiscal notes has speeded fiscal note processing; and direct access by the public to the Bill Status System, the MCA on CD-ROM/Internet, and bill text on the State Bulletin Board System (BBS) has allowed, quick and direct access by interested citizens.

The Planning Council anticipates that in the future, substantial time, effort, and money will continue to be focused on the speed, quality, and reliability of the internal information processing systems that the Legislature relies on to conduct its business. As both technology and the processes of the Legislature change, these systems must be kept up-to-date to ensure their reliability and that they will continue to meet the ever-changing and ever-growing needs for timely and accurate information analysis in the Branch. It is also expected that the level of public demand for immediate and direct access to government information will continue to grow and that this demand will consume a greater percentage of information resources than it has in the past. Finally, it is expected that the public will also request more direct input into the government process through technologies such as e-mail and interactive video conferences. These opportunities will need to be evaluated in the future based on their value and cost- effectiveness.

The Planning Council believes that the Branch is prepared to tackle these challenges in IT. An active Planning Council, supported by a well-qualified and professional technical staff, will ensure that both the processes in place and the systems that support them are reviewed and updated and that opportunities to improve public access to government are evaluated, cost-justified, and implemented when feasible. The Branch is not only communicating and working together internally, but also externally with the Executive Branch and other local, state, and national government agencies to ensure coordination. The Branch plan for automation includes guidelines and established standards that have been designed to support a smooth transition to the future as technology advances.

Technologically, the Branch is supported by a large base of valuable microcomputer technology and a replacement plan that ensures adequate and up-to-date computer hardware in the future. Software is largely standardized and current, as well. This allows the Branch to focus on consolidation of data, software development, and information processes. The centralization of the computer network support and systems development staff, servers, budget, and

other resources provides a high degree of efficiency in delivery of IT services. In addition, a major challenge to the Branch and the Department of Administration (DOA) is to upgrade the cable in the Capitol to support the current and future information communication needs. This project is scheduled to begin in the summer of 1997 and will be done in conjunction with the Capitol renovation project.

In order to support this information infrastructure, the Planning Council has requested one central IT biennial budget of $1,939,182 for the Branch for computer and network needs. Based on the approval of the central budget concept by the Legislature in 1991, the Legislative Services Division has again included the central computer budget proposal as part of its budget. This proposal maintains expenditures at the same level as for the FY 1996-97 biennium, with the exception that network connect fees have gone up.

Major projects/goals include maintaining the operational status of the current network and application systems, conversion from Windows 3.1 to Windows 95/Windows NT (or the state standard 32 bit desktop OS), conversion to the new state e-mail system, implementation of the Legislative Automated Workflow System (LAWS), conversion and consolidation of several administrative systems to an Oracle client/server-based system, and some enhancements to existing Oracle systems.

Support for legislator-owned computers has been one of the more difficult issues to address over the past several years. The Planning Council anticipates growing difficulties and opportunities in this area. Successful network administration (serving the Branch) is heavily dependent upon predictable behavior of attached components. Adding legislator equipment of differing brands with a variety of software having varying release levels vastly complicates the network support arena and ultimately risks the integrity of the entire Branch network. Each component of incompatibility creates the need for new layers of support, cuts productivity, raises training costs, and makes it harder to "re-engineer" workflows to get information to more people. For these

reasons, the Planning Council recommends against support of privately owned machines on the network. The Planning Council recognizes, however, that integrating legislator use of computers into the system will be a priority in the near future. A considerable planning effort will be required to define the appropriate hardware and software packages needed to provide a useful set of tools for legislators. Recognizing this fact, the Legislature adopted House Joint Resolution No. 23 in 1991, directing a specific study of the question of legislator use of computers. The study document, "Study on Use of Computers by Legislators", can be obtained from the Legislative Services Division. The study concluded that although cost factors may preclude a recommendation for purchase of computers for all members' use in the near term, there is a great need to work toward making data services more readily available to members.

In summary, the Planning Council believes that the Montana Legislature has taken a conservative and prudent, but effective, approach to IT use in the past. Cooperation and coordination both within the Branch and with other agencies and organizations have ensured both effective and cost-effective decisions. The plans, processes, and visions of the Planning Council, as detailed in this report, should ensure that the current investments and opportunities are successfully used and form the basis for more efficient and effective legislative processes.

ACKNOWLEDGMENTS

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LEGISLATIVE BUSINESS FUNCTIONS

The Montana Legislature is one of three branches of state government created by the Montana Constitution. The people of Montana express their will directly through the Legislative Branch, which enacts laws, levies taxes, and appropriates revenue received from those taxes to various agencies of government for public purposes.

The structure and function of the Montana Legislature are prescribed by constitutional law, statutes, and legislative rules. The Legislative Branch divisions established to support the Montana Legislature and its committees are the Legislative Services Division (LSD), the Legislative Audit Division (LAD), and the Legislative Fiscal Division (LFD). The legislative responsibilities include areas such as lawmaking, appropriation, taxation, oversight of the Executive Branch, and representation of local interests. The primary function of the Legislature, however, is lawmaking, which consists of the consideration of bills. Other responsibilities of the Legislature that support its primary function include research, fiscal analysis, legislation and policy development, information distribution, oversight, and administration. These are described briefly below.

A. RESEARCH

The LSD, LAD, and the LFD all provide nonpartisan research services to the Legislature. The LSD staff provides reports and prepares bills for the legislators and committees. They also provide legal research and a reference library for the Branch. The Legislative Environmental Policy Office, within the LSD, provides research and analysis of environmental issues. The LFD provides research support in matters related to budgeting. The LAD is called upon to research, analyze, and report on audit issues.

B. FISCAL ANALYSIS

The LFD provides an independent review of the Governor's budget. It also

conducts research and analysis of revenue and expenditure trends and provides reports on the impact of economic changes on both enacted and proposed legislation. By performing fiscal analysis and by assisting legislators in understanding agency budgets, the LFD helps the Legislature make responsible decisions about the collection of state revenue and the subsequent investment of, and allocation to, state government programs.

C. LEGISLATION AND POLICY

The LSD, House and Senate staff, and the LFD provide staff support to the Legislature as it proposes, debates, and makes decisions on legislation. The Central Services Office of the LSD provides clerical support for the bill drafting, introduction, engrossing, enrolling, and codifying of bills. House and Senate staff provide clerical support to committees, support the flow of bills through the House and Senate, and generally support the operation of the House and Senate.

D. INFORMATION DISTRIBUTION

All legislative divisions participate in the distribution of information to the Legislature and the public. For example, legislative audit reports are available to the public, as are budget analysis, legislative fiscal, and interim reports. The Data Distribution Center in the LSD distributes all legislative proceedings in both printed and electronic formats to the Legislature and the public during the session. These include bills, amendments, resolutions, status reports, and journals. The Legislative Information Office provides to the public direct in-person and telephone access on the status of legislative proceedings and the daily calendar of events. The Office of Legislative Information Technology supports the systems that allow the creation and maintenance of electronic information and that make electronic access to bill status and text possible. The Legal Services Office, the Central Services Office, and the Office of Legislative Information Technology are responsible for preparing and distributing the MCA, related rules, journals, annotations, and other documents related to

the proceedings of the Legislature.

E. OVERSIGHT

The LAD provides oversight by regularly auditing the functions of state government and gives the Legislature and the public an independent analysis of the effect of laws and rules. These reviews allow the Legislature to analyze whether the Executive or other elected officials comply effectively and efficiently with the laws and policies of the Legislature. The LAD also investigates reports and allegations of fraud in state government. The Legislative Environmental Policy Office serves in an oversight capacity for state government on environmental issues. The LFD is statutorily charged with oversight responsibility for the appropriations process, revenue, and other fiscal policy issues. The LSD has oversight responsibilities incorporated in support of the Revenue Oversight Committee and the Administrative Code Committee and for other like assignments.

F. ADMINISTRATION

The Central Services Office of the LSD provides purchasing, personnel, and accounting services for the entire Legislative Branch. These services help to efficiently expedite daily business issues and needs of the Branch.

Additional information on the legislative process can be found in A Legislator's Handbook, 1997, by the Montana Legislative Services Division. In addition, the publication provides background on the relationship of the process to constituents, the media, other government agencies, and lobbyists.

The mission, goals, and objective documents submitted as part of the biennial budget process are another valuable source of information about the Legislative Branch.

IT CONTRIBUTION TO THE LEGISLATURE'S BUSINESS

The Legislature is information. All that it works with and all that it produces are information. In this information age, enhancing the ability to gather, process, and distribute legislative information more quickly and more accurately is a necessity.

The State of Montana, through its Information Technology Advisory Council (ITAC), has adopted the view that information is critical to the functioning of government. Its view is expressed in the following observation from the Information Technology Strategic Plan, July 1994:

> The people of the state can benefit from information made available both by state agencies and by others, including local government agencies, education, libraries, and other not-for-profit institutions, and for-profit organizations. The free flow of information between the government and the public is essential to a democratic society. Correspondingly laws reflect increasing demands that state government be responsible for providing the public and other governmental entities with access to information an agency may possess that illuminates the operation of government itself, society, and the economy--past, present, and future. Open access to information is a means to ensure the accountability of government . . . .

Technology is the primary tool used by the Branch to collect, analyze, and disseminate information. Therefore, the Legislature is dependent on its technology. When deciding how and for what purposes to use technology, it is critical to understand how it is incorporated into the legislative process. The technology planning process, established by Title 5, chapter 11, part 4, MCA, helps ensure that the Legislature is making effective decisions about incorporating technology into the legislative process.

CURRENT IT ENVIRONMENT

The next four sections summarize the history of IT development in the Branch, the current organizational and technical environment that supports IT processes and initiatives in the Branch, and the accomplishments that have been made to improve legislative processes.

A. REVIEW OF LEGISLATIVE BRANCH AUTOMATION PROCESS

Over the past two decades, the Legislative Branch has become nearly completely reliant on computer technology to administer the business processes of the Branch. From 1970 to 1985, most applications were on the state mainframe computer. The LSD, for example, used a proprietary program called Automated Legal Text Entry and Revision (ALTER) to manage code and bill text data. The advent of the personal computer rapidly transformed this environment. Stand-alone dedicated word processors were barely introduced when they were replaced by personal computers with multiple capabilities. Soon, those personal computers were linked to one another in networks, and the potential for improvement exceeded the ability of the Branch to keep up.

Recognizing the need for planning, the Senate contracted with a private consultant during the 1987-89 interim to review the situation and recommend applications. Senate planning led to implementation of a network in the Senate for the 1989 Session. The process was mirrored by the House, which implemented a limited system tied closely to the LSD system. The growth of applications in the House and Senate led to recognition by legislators and staff that integration of the systems was important to the future operation of the Legislature. Central planning for the Branch was essential in order to achieve appropriate integration.

Since recognition of the need for planning grew from the increased use of information systems throughout the Legislative Branch, some evaluation of all information systems was required. An informal review of existing systems was

conducted by the technical staff. This work clearly identified a predominant need to improve and further integrate office automation and information processing functions throughout the Branch.

The primary focus on the application of technology has been on the improvement of legislative staff productivity. Use of IT has been effective, and specific cases are noted in the IT accomplishments section.

In recent years, other agencies and lobbyists have, on a small scale, been included in direct technological access to the legislative staff and process. For example, distribution of the MCA on CD-ROM, direct TV and radio media access to some of the proceedings in the chambers, dial-in public access to bill status, use of the state electronic BBS for information distribution, use of the Internet for public access to MCA text and session proceedings, and use of the state mainframe and data network to communicate directly with agencies electronically for audits and financial analysis have all expedited the flow of information to and from the Branch.

A thorough review of processes in the Legislative Branch was conducted during the FY 1996-97 biennium. This review was conducted as the first phase of consolidating the systems development function in the Branch. Other goals of this project were to determine where overlap existed in Branch processes and to determine where current technology could be applied to gain efficiency. This project took about 9 months and was completed in February of 1996. A local contractor was hired to conduct the analysis. The results of the analysis were used to develop the project list and budget for the FY 1998-99 Legislative Branch Computer System Plan. For more information on the project see "State of Montana, Legislative Branch, Automation Analysis Final Report".

B. ORGANIZATION

In addition to a computer system plan, an appropriate IT organizational structure is necessary to effectively implement the goals of a plan. The following IT

organizational structure has been established:

Legislative Branch Computer System Planning Council

Mission: to develop and maintain a Legislative Branch Computer System Plan in accordance with 5-11-403, MCA

Legislative Council

Mission (as it relates to IT):

to serve as the Legislature's approving authority for the Legislative Branch Computer System Plan in accordance with 5-11-405, MCA

Executive Director, Legislative Services Division

Mission: to provide leadership to the Legislative Branch Computer System Planning Council and provide technical staff support to the Planning Council

Technical Planning Group

Mission: to assist the Executive Director of the Legislative Services Division and the Office of Legislative Information Technology staff in providing technical planning support to the Legislative Branch Computer System Planning Council

Its input ensures the Planning Council that goals are achievable, that everyday needs are met, and that significantly major issues are addressed. This group includes staff from each legislative division responsible for IT services within their own divisions

Technical Implementation Planning Group

Mission: to assist the Technical Planning Group and the Office of Legislative Information Technology in providing technical support to the Branch

Once specific IT goals and objectives have been established, this group works out the details of implementing the technology so that it meets the needs of the Branch. For instance, when the Branch decided to consolidate on one network, this group determined the drive assignments and directory structure for that network. This group includes IT staff and technical representatives from each legislative division.

Office of Legislative Information Technology

Mission: to play the lead role in implementing the computer system plan established by the Planning Council and adopted by the Legislature

To accomplish this objective, this office houses the Network Services and System Development IT staff. The Office of Legislative Information Technology works in cooperation with TPG, TIPG, and Division leadership to implement technology for the Branch. Also, through this staff, coordination is provided for information services and relationships with outside organizations, such as the general public, lobbyists, and other agencies.

The Planning Council has also developed reliable ways of coordinating with other agencies and organizations. For example, participation by the Executive Branch (Department of Administration) in the Planning Council and the TPG activities ensures constant communication on state system compatibility. The Planning Council recognizes the need to ensure compatibility as a legal

requirement, to minimize purchase and support costs, and to facilitate information access. Participation by the Branch in the Information Technology Advisory Council (ITAC) and the Information Technology Managers Group (ITMG) organizations keeps the Planning Council in touch with the directions of not only Executive agencies, but also the Judiciary, other elected officials, and, most recently, the University System and the cities and counties.

The Branch relies on the Department of Administration to provide and operate the data and telecommunication networks within the Branch as well as connecting it to the "outside world". The relationship allows the Branch to focus its limited staff resources on collecting, analyzing, and communicating information rather than on maintaining and operating the network infrastructure.

C. IT EQUIPMENT

The technological equipment implemented in the Branch puts the Branch in a good position to tackle the last half of the decade. The paragraphs that follow briefly describe the technology used in the Branch.

1. Computer Hardware

The Branch has determined that most of its internal computing needs can be met cost-effectively using microcomputer hardware. Currently, there are approximately 200 IBM Compatible PCs in the Branch network. The Branch also operates a pool of approximately 10 portable computers.

The Branch will continue to rely on the state mainframe (operated by the Department of Administration) for large statewide systems, such as the Statewide Budgeting and Accounting System (SBAS) and the Payroll, Personnel, and Position Control System (PPP), as well as for access to large agency systems.

The mainframe is also being used for a few Branch systems, such as the Bill Status System and the MCA codification process. However, current plans are to replace the Bill Status System with a client/server-based system in the FY 1998-99 biennium.

The Branch also leases Oracle server services from the Department of Administration for the Montana Integrated Budget System, SBAS Access and Reporting Tool, Information Request System, and several internal administrative systems.

2. Computer Software

The Branch has standardized its microcomputer software. These standards are the same as those used by the Executive Branch on major projects. Appendix C contains the Branch software standards.

3. Telecommunications

The token-ring Local Area Network (LAN) and the SummitNet Wide Area Network (WAN) provided by the DOA provide a fast, efficient pathway for data network traffic within the Branch and to the "outside world". The Branch expects to make significant use of the Internet and significant, but decreasing, use of the BBS for contact with the public through this network, as well as the state's mainframe computer. The cable used in the Capitol, however, is substandard. This inhibits the expansion of the network to new uses and offers a significant risk to the continued reliable operation of nearly all the Branch's IT activities. Current plans are to upgrade the data and communication wiring infrastructure in the Capitol in the summer of 1997. The wiring upgrade is part of the Capitol renovation project approved by the 1995 Legislature.

D. IT ACCOMPLISHMENTS

The Legislative Branch has made numerous technological achievements.

Descriptions of several of the major achievements are delineated in the pages that follow. The descriptions also illustrate Branch reliance on IT resources.

1. **Information Collection**

- The Legislative Branch has installed LANs, using state and Legislative Branch standards. These networks have been attached to the state data network and can communicate with each other and with the state mainframe. Branch staff, working at various state agency sites, can attach to the Branch LANs via the state data network. This improves productivity by allowing the transfer of information easily without travel time to and from the office. A number of the achievements listed below could not have been accomplished without these networks.

- Several mainframe and Oracle client/server programs have been developed and enhanced to help evaluate the state agency financial information maintained on SBAS and PPP.

- The Branch has issued seven EDP audit reports on state agency controls of information resources and agency use of information resources.

- The cataloging system for the LSD Library has been automated, which has improved access to data.

2. **Information Analysis**

- The Branch has standardized on IBM compatible PCs for information analysis. This microcomputer standard (for the client processor) provides the most computer power for the lowest price. The Branch is also beginning to implement client/server technology for many of the Branch core systems.

- Use of the analysis tools provided on the PC has resulted in increased

productivity and quality of the audits completed by the LAD. For example, downloading state agency SBAS information into a Lotus spreadsheet provides the audit staff with the ability to more quickly and easily conduct analysis and complete audit testing.

- Several improvements have been made to the bill drafting process by applying automation. The bill drafters now use PCs to draft bills instead of manual methods. This has resulted in increased staff productivity and has allowed data entry staff to work on other projects. A bill conflict check has also been implemented, which indicates when multiple bills are amending the same section of code. A bill drafter can then check to ensure that the amendments do not conflict.

- The Bills Process, a mainframe operation from 1973 to 1993, has been converted to run on the PC network using WordPerfect. The print formatting capabilities of WordPerfect have produced a more readable and more flexible bill format than was possible before. Also, it will be easier to hire and train qualified Bill Processing session staff because WordPerfect is so widely used for word processing. A third benefit is that public access to the text of bills may be more easily supported (i.e., by placing the text, with only minor conversion, on the BBS).

- Several improvements have been made to the legislative budget analysis and tracking process. Better analysis is being provided through use of the personal computer and its analysis tools, such as Lotus 1-2-3, Lotus Approach, and Oracle. Also, the time necessary to engross the general appropriations bill has been reduced from 3 or 4 days to 1 or 2 days.

- The revenue estimating system continues to be refined. The impact of a single factor changed by the Revenue Oversight Committee can be reflected throughout the revenue estimate with minimal analyst effort, allowing time for more focus on the analysis rather than on the procedural aspect of revenue forecasting.

- Flowcharting software is used by audit staff to document state agency processes. This helps audit staff more easily gain an understanding of the processes and allows for easy update or modification when processes change.

3. **Information Dissemination**

- The House and Senate voting system software has been upgraded to allow it to be run on standard IBM compatible PCs. This has made it easier for staff to support the system because they already have PC expertise. Implementation of these systems has resulted in integration of the vote and agenda functions, thus requiring only one operator instead of two, as needed before. Since both voting system PCs are attached to the Legislative Branch network, it is easy to transfer the votes to the journal, which is also input on a PC on the network. Both the House and Senate vote systems also use the network to print votes on the network printers in the House and Senate main offices.

- A bill status/bill tracking system has been implemented and is continually being enhanced. This system helps the House/Senate leadership and staff manage the flow of bills through the Legislature so that bill processing deadlines can be met. It also provides the public with a means of tracking the legislative process.

- The entire MCA camera-ready process is now done by legislative staff using a PC-based system and laser printers. This has resulted in significant cost savings and no additional FTEs. The full text of the MCA is stored on CD-ROM. This electronic storage version provides an alternative to publishing the MCA in hardbound version. Purchasers of the MCA CD-ROM can use parts of the MCA in briefs, memos, reports, etc., without having to rekey the text. In addition, the MCA CD-ROM provides a means of searching the MCA text for specific words or phrases.

- Preparation of the daily journal is now done on PCs at the rostrum. The old method required the rostrum journal staff to prepare the journal in written form for input by data entry staff. The new method has resulted in more timely preparation of the journal and a reduction in staff time needed to produce the journal. The journal is disseminated primarily in electronic form.

- Several improvements have been made to the amendments process. The amendments are now printed centrally in the amendment coordinators' offices. Special forms, and the printing costs associated with them, are no longer required. The general format of the amendment is maintained on the PC word processor. Amendments can be prepared by a bill drafter, reviewed by an editor, and sent to the amendment coordinators through the existing computer network. This has resulted in amendments being more accurate and timely.

  All amendments must go through the amendment coordinators and are stored on the network. This stored copy of the amendment is used to display the text of amendments on the House and Senate display boards during second reading. The text of amendments is also used by the engrossing staff when engrossing bills. This prevents having to rekey long amendments.

- An electronic version of all bill status reports (prior to the 1995 Session, these reports were printed for distribution to the general public) is available for electronic distribution on the BBS plus electronic distribution over the state e-mail system.

- The daily agenda of the House and Senate is on all the same electronic facilities as status reports. Agendas are made available electronically at the same time as they are sent to printing.

- Using state standard software has allowed the Branch to obtain

information directly from state agencies on diskette without having to rekey it, thus maintaining the integrity of the data.

IT DIRECTION AND VISION

The Planning Council has a vision for the Legislature's use of IT, which consists of two parts:

1. To provide for the efficient, timely, and effective operation of the business of the Legislative Branch in order to support its various functions;

2. To continually apply and improve IT to help minimize impediments to the collecting and disseminating public policy information to all interested parties.

The second part of this vision is consistent with the ITAC's vision for Montana, mentioned in the "Information Technology Strategic Plan, July 1994". A task force recommended in that report:

> . . . the state [of Montana] should adopt a vision . . . that would guide information technology planning and development to take advantage of current and future service delivery and/or access technologies for citizens in their homes, businesses, schools, libraries, and organizations.

In continuing to expand and change the existing IT environment to meet both of these goals, the Planning Council is seeking an integrated information system that supports the information needs of the Montana Legislature and the public.

As the system is developed, constant additions of reports and data maintained for download are foreseen. A migration toward a single graphic system interface that will present appropriate information and services to the different user groups is envisioned. The internal technical infrastructure of the Branch system will also be integrated to the extent that the greatest efficiency is achieved.

Ultimately, there will be one common system look and feel for all system users for text, video, graphics, etc. Users will be able to sign on to the system and work their way through a series of choices or go directly to a predetermined choice quickly and easily.

IT ACTION PLAN FOR THE LEGISLATIVE BRANCH

There are several important tenets to any successful plan. First, it must seek to move toward a long-term vision. That IT vision for the Legislature has been identified above. Second, it must consist of relatively long-range goals or milestones. Third, it must accomplish short-range tasks to move the organization toward its long-range goals and, ultimately, its vision. Finally, the plan must provide a continual process of reviewing the findings of the short-term tasks in light of changes in the needs and opportunities of the organization. This process is provided for by the charters of the Planning Council, the TPG, the TIPG, and the Office of Legislative Information Technology, as well as the legislative review of this plan. The short-term tasks that have been identified are listed below.

SHORT TERM (BIENNIAL PLAN)

The following is a brief description of the tasks identified for the FY 1998-99 biennium and their benefits. Additional information can be obtained from the Office of Legislative Information Technology staff.

A. MAINTAIN THE OPERATIONAL STATUS OF THE CURRENT NETWORK AND APPLICATION SYSTEMS -- $1,337,182[1]

- Continue to upgrade software packages (WordPerfect, Lotus, etc.) to keep them on currently supported releases. Continue to fix and maintain PCs, servers, printers, etc. Continue to attach Branch PCs, Servers, Printers, etc, to the State Backbone Network.

- Continue to phase out old and technically obsolete hardware. The Branch has established a 5-year life span for PCs. In the planning, purchasing, and budgeting process, the Branch will replace PCs and PC peripheral equipment after 5 years of use. With a 5-year life cycle, 20% of the PCs in the Legislative Branch must be replaced every year. The

Branch has also established a replacement cycle of 4 years for network file servers. Due to the increased usage and wear and tear on file servers, they have a shorter life cycle than a PC used as a workstation. A replacement cycle of 4 years has also been established for printers. Printers are largely mechanical devices and as such are subject to breakdown after long usage. They also become technically superseded by newer printers after about 4 years.

- Convert the Branch to Windows 95 and/or Windows NT. Montana state government has adopted Windows 95/Windows NT as the replacement Desktop Operation System for Windows 3.1/DOS. In order to obtain adequate support from Information Services Division and PC software vendors, the Branch will need to convert to Windows 95/Windows NT. Converting the Branch during the FY 1998-99 biennium will be appropriate timing. Windows 95/Windows NT 4.0 will have been released and on the market for about 1.5 years. Software bugs associated with first releases should be fixed by then.

- Implement the new state government e-mail system. The current enterprise e-mail system is no longer supported by the vendor. A new replacement e-mail system will be selected and implemented. Implementation is planned for the FY 1998-99 biennium. This item is budgeted for by ISD. Branch network staff will work with ISD to install the new e-mail system on the Branch network.

- Maintain current application systems. The Branch has used Oracle (and other software development tools) to develop several customized systems. Examples are the MIBS, Information Request System, and SBAS Access and Reporting Tool. Customized systems require periodic maintenance, i.e., programmers must periodically adjust the programs to make them run properly. Full-time staff or contracted services, or both, will be used to maintain the operational status of the Branch application systems. Additionally, the Branch leases Oracle server services from

ISD for several Branch Oracle systems. This lease is also necessary to maintain operational status.

- Continue to support the centralization of IT staff and ensure the development of staff capabilities to effectively use the ever-changing technology and to understand and provide IT solutions to meet the needs of the Branch.

- Prepare a disaster recovery plan for the Branch network and Branch application systems. A disaster recovery plan will assess the risk of a prolonged outage of computer services to the Branch and provide a plan to minimize that risk in a cost-effective way.

- Perform an audit of IT Systems in the Branch to ensure that they are complying with proper IT development and operational standards.

- Work with and support the DOA in upgrading the Capitol wiring to ensure the continued operation of the Branch network and to provide the increased capacity that is needed to facilitate Branch use of new technology.

B. INTEGRATE AND STREAMLINE SEVERAL BRANCH LAW MAKING PROCESSES -- $640,000[1]

- The Branch currently has several disparate computer systems supporting Branch processes before and during a legislative session. The current computer systems supporting these processes are becoming obsolete and prone to failure. A new system will allow the automation, integration and streamlining of processes associated with bill and amendment drafting, bill and amendment tracking and status, bill introduction, committee support, journals, agenda preparation, enrolling and engrossing, sections affected, and indexing. This system is called the Legislative Automated Workflow System and will be purchased from

a vendor through a Request for Proposal (RFP) process.

C. **CONVERT AND CONSOLIDATE BRANCH ADMINISTRATIVE SYSTEMS -- $105,000[1]**

- With consolidation of the Branch organizational structure during the FY 1996-97 biennium, a resulting consolidation of the Branch administrative functions (accounting, payroll, inventory, purchasing, billing, training, publication distribution, etc.) occurred. In the past, Branch divisions individually owned and operated their own computer systems to accommodate these administrative functions. A rewrite of these disparate systems is necessary to consolidate them into one system and also to bring them up to current state standards using Oracle client/server technology. Some of this work was done during the FY 1996-97 biennium. The plan is to finish this work during the FY 1998-99 biennium.

D. **MINOR ENHANCEMENTS TO EXISTING ORACLE SYSTEMS -- $67,000[1]**

- The MIBS and the SBAS Access and Reporting Tool are systems that were developed during the FY 1996-97 biennium using Oracle development tools. Usually after a major rewrite of a system, minor enhancements to the system are identified. The plan is to allow for minor enhancements to these systems.

E. **EXPAND ACCESS TO LEGISLATIVE DATA FOR LEGISLATORS AND THE PUBLIC -- $10,000[1]**

- The Branch currently offers access to legislative data (bill text, bill status, journal, etc.) through the BBS, through the mainframe, and through printed materials. The wave of the future for providing data to the public is through the Internet. The plan is to provide legislative data through the Internet. Legislators could also access this data with their

own laptops.

By accomplishing these tasks, the Branch will make major headway in making IT processes more dependable and efficient. The Branch will also make important contributions to the legislative process by increasing public access to, and participation in, government.

[1]The total estimated cost for tasks A through E is $2,159,182. The total budget available is $1,939,182. Savings in management efficiencies or reduced system requirements of $220,000 will be needed to bring the cost to within the budget amount.

FY 1998-99 CENTRAL COMPUTER BUDGET PROPOSAL

In order to implement any action plan, the necessary IT resources must be clearly identified. This budget proposal identifies the hardware, software, supplies, and contracted services necessary to achieve the Branch goals outlined in the plan. Appendix D contains the details of the budget. The total Central Computer amount budgeted for the biennium is $1,939,182. This is the same amount that was budgeted for the FY 1996-97 biennium, with the exception that network connection fees have increased.

It should be noted that individual legislative division budgets include existing IT costs for items such as mainframe and telephone. The Consumer Counsel is not included in this Central Computer Budget Proposal.

APPENDIX A

Montana Code Annotated 1995
Title 5, chapter 11, part 4
Computer System Planning

5-11-401. Purpose. It is the purpose of this part to establish a mechanism for computer system planning encompassing broad policy needs, long-term direction for computer use, and the effective implementation of a detailed plan for the legislative branch. It is the purpose of the plan to assure coordination of information system decisions so that the overall effectiveness of the senate, the house of representatives, and legislative agencies may be improved. It is the further purpose of the plan to enhance the coordination of legislative branch systems with executive branch systems wherever possible.

5-11-402. Legislative branch computer system planning council. There is a legislative branch computer system planning council composed of:

(1) the secretary of the senate or another representative of the senate designated by the president;

(2) the chief clerk of the house of representatives or another representative of the house designated by the speaker;

(3) the sergeants-at-arms in the two houses or another representative of each house designated by the presiding officer of the legislative administration committee of that house;

(4) the executive director of the legislative services division, who shall chair the planning council;

(5) the legislative auditor;

(6) the legislative fiscal analyst;

(7) the consumer counsel; and

(8) a person designated by the director of the department of administration to represent the data processing policy and planning functions of the department, who shall serve as a nonvoting member of the planning council.

5-11-403. Duties of legislative branch computer system planning council. (1) The legislative branch computer system planning council shall develop and maintain a legislative branch computer system plan. In developing and maintaining this plan, the planning council shall:

(a) continuously review or have reviewed existing information systems that are candidates for automation or enhancement, as well as review existing automated systems that may be improved or integrated with new applications;

(b) develop and maintain a description of functions or services in the legislative branch and its agencies that would, through application or improvement of computer technology, provide better service to members of the legislature, legislative agencies, and the public;

(c) develop and maintain a ranking of needs, taking into consideration the relative effectiveness and probable cost of alternative systems; and

(d) develop and maintain recommended system standards for the legislative branch and standard or custom software and hardware solutions appropriate to the needs and environment of the legislative branch and its agencies.

(2) To the extent possible:

(a) future applications should be explicitly identified in the plan;

(b) current applications should allow a high degree of flexibility so that future applications are not limited; and

(c) both current and future applications should be coordinated and compatible with the standards and goals of the executive branch established under 2-17-501 through 2-17-503, as well as the legislative branch standards developed in accordance with the requirement in subsection (1)(d).

5-11-404. Technical support. (1) The executive director of the legislative services division shall provide technical staff support to the legislative branch computer system planning council. In performing this duty, the legislative services division shall assist the planning council by:

(a) developing or having developed analyses of existing and alternate systems;

(b) providing technical solutions and advice related to the standards set by the planning council;

(c) assisting in assessing benefits and costs of optional solutions;

(d) apprising the planning council of developments and directions in the industry;

(e) maintaining a liaison with and informing the planning council of plans and directions within the executive branch; assisting in the selection and purchasing of supplies and equipment; and

(f) providing other assistance as may be requested.

(2) The executive director shall encourage participation of appropriate personnel of the senate, the house of representatives, and other legislative entities in the provision of technical support.

5-11-405. Legislative branch computer system plan -- adoption. The legislative branch computer system plan must be approved and adopted by the legislative council.

5-11-406. Legislative branch systems -- conformity to standards. Computer hardware and software systems installed by the senate, the house of representatives, and legislative branch agencies must conform to standards established in the legislative branch computer system plan in effect at the time the purchasing decision is made.

APPENDIX B

1996-97 Biennium Legislative Branch IT Accomplishments

The projects and tasks described below have been accomplished during the 1996-97 biennium. Some of these tasks are the result of initiatives taken 4 to 5 years ago. Other tasks were started more recently, but all have taken significant effort and resulted in significant achievement in the 1996-97 biennium.

1996-97 IT Achievements

- An extensive analysis of all business processes, and information systems in the Branch was conducted. This analysis provided the Branch with the following:
  - documentation of the processes and systems in the Branch
  - identification of overlap in processes
  - identification of potential uses of new technology (client/server, document management, workflow, etc.)
  - cost of applying new technology to the processes
  - a basis for setting priorities and justifying the application of this new technology

  This analysis was used by the Branch to determine development project priorities for the FY 1996-97 biennium and to develop a computer system plan for the FY 1998-99 biennium. This project is also helping to ensure that all future development by the Branch is integrated and that overlap in processes is eliminated.

- The Branch, in conjunction with the Office of Budget and Program Planning, has developed a joint budgeting system using Oracle client/server technology. The system is called the Montana Integrated Budget System (MIBS). The MIBS replaces several legacy systems: the Executive Budget System (EBS), the Legislative Budget System (LBS), the Legislative Appropriation Reporting System (LAS), and the

Revenue Estimate Reporting System (RES). These antiquated legacy systems were used by all branches of government, including the Legislature. These systems were not integrated and were limited in their capacity for accessing and manipulating data. The MIBS system has been defined functionally as having several distinct components, namely the budget development component, the legislative process component, and the Executive turnaround/comptroller component. It will be used extensively during the entire biennial budget cycle.

- The Branch has completed the conversion to one centrally managed Novell Network. This has reduced network support costs because fewer network servers are managed and therefore fewer network support staff are needed to manage the servers.

- The Branch has completed the conversion to Windows 3.1 (with the exception of the House and Senate, which are planned for conversion after the 1997 Session). The Windows 3.1 interface provides increased efficiency in accessing multiple applications and in learning new applications. Windows 3.1 was also necessary to begin developing Oracle client/server systems.

- The process of analyzing SBAS data for audit purposes was enhanced by developing an Oracle client/server system. The system allows audit staff to easily analyze agency SBAS transactions at the desktop and improves staff ability to investigate various transactions or trends.

- The three separate employee time and cost accounting systems in the Branch were combined into one system for the Branch using Oracle. The Central Services Office now uses only one system for employee time and cost accounting, resulting in a savings of staff time.

- A Branch system was developed to track requests for Branch staff to

research and provide information on various topics. This system documents these requests for future historical reference and helps Branch agencies track instances of duplicate requests for information, thus reducing the effort to respond to these requests.

- The Branch has consolidated the IT function within the Office of Legislative Information Technology. Consolidation of this function provides for greater efficiency in the use of IT FTE and provides a professional staff with career progression opportunities.

- The bill text, journal text, and bill status information for bills from the 1995 Session were made searchable and put on a CD-ROM for distribution.

- Access to the Internet was provided for Branch staff. The Internet contains information that is valuable for the research and analysis process. Several information providers in the future will be providing their information only through the Internet. In addition, the Internet can be used to send information to other users of the Internet. For instance, the National Council of State Legislatures staff are on the Internet and can send and receive e-mail to the Montana Legislative Branch staff.

- The Branch has a home page on the Internet. Several parts of this page are under construction, Nevertheless, enacted bills, journals, and the combined history and final status from the 1995 Session are available and searchable. The text of the MCA is also available and searchable. The 1997 Session bills, bill status, journals, and subject index will also be available through this home page via a connection to the current BBS.

- Financial schedules for LAD are generated on the mainframe and downloaded to the PC, and camera-ready is produced in either

WordPerfect or Lotus. This has improved the readability of the information.

- Audit reports are standardized and formatted through a series of WordPerfect macros. This has improved efficiency in producing the reports.

- The central IT staff, in conjunction with division network coordinators, performed maintenance and upgrades to hardware, software, and applications, closing over 400 requests for technical assistance.

APPENDIX C

Legislative Branch Standards

The following standards have been adopted for the Legislative Branch. All legislative divisions are required to follow these standards for new purchases or to convert to these standards when it is most cost-effective. These standards are periodically reviewed and updated as Branch needs or state and computer industry standards change.

Application	Standard
Word Processing	WordPerfect
Spreadsheet	Lotus 1-2-3
Data base	Oracle for large and midlevel development projects. Lotus Approach for low-end user development and data analysis.
Desk Top Publishing	Ventura Publisher
Graphics	Freelance
Desktop OS	DOS/Windows 3.1, Windows 95/Windows NT
3270 Emulation	Attachmate EXTRA!
E-Mail	Zip!Mail/ZIP!Office
Modem hardware	Hayes compatible
Dialup software	PC Anywhere
LAN Operating System	Novell NetWare
Computer Hardware	State Term Contract IBM compatibles

All legislative divisions are to maintain the same release level for each software standard. To date, divisions are on the same release of all software. Transition from older software applications to current standards is provided for in the plan.

APPENDIX D

LEGISLATIVE BRANCH CENTRAL COMPUTER
PROPOSED BUDGET FOR FY 1998-99

Leg. Cent. Computer 2042	OBJ 0000.0	FY 98	FY 99	
OPERATING EXPENSES	2000.0			
Data Network Services D of A	2174	113,520	196,680	Network Connect Fees
System Development non D of A	2176	200,962	406,150	Contracted Services
MISC. INFO SVC D OF A	2187	90,240	105,500	Server Lease & tape stor
OTHER SERVICES Total 2100	2199.9	404,722	708,330	
SUPPLIES AND MATERIALS	2200.0			
OFFICE SUPP / NONSTATE	2241	15,793	29,383	Supplies
MINOR COMPUTER EQUIPMENT	2245	164,721	100,480	
MINOR SOFTWARE	2249	68,803	56,577	
TOTAL SUPPLIES AND MATERIALS	2299.9	249,317	186,440	
TRAVEL	2400.0			
OUT- OF- STATE COMMERCIAL	2412	0	0	
TOTAL TRAVEL	2499.9	0	0	
REPAIRS & MAINT	2700.0			
MAINTENANCE CONTRACTS	2750	44,143	59,230	Hardware Maintenance
TOTAL 2700	2799.9	44,143	59,230	
OTHER EXPENSES	2800.0			
Education/training	2809	30,000	30,000	User & Tech Training
OTHER EXPENSES Total 2800	2899.9	30,000	30,000	
Total 2000	**2999.9**	**728,182**	**984,000**	
EQUIPMENT & INTANGIBLES	3000.0			
Fileservers/printer/etc.	3134	102,000	115,000	Hardware Purchases
EQUIPMENT Total 3100	3199.9	102,000	115,000	
MULTI USER SOFTWARE	3401	5,000	5,000	Software Purchases
INTANGIBLES Total 3400	3499.9	5,000	5,000	
Total 3000	**3999.9**	**107,000**	**120,000**	
Total Leg. Cent. Computer	**9999.9**	**$835,182**	**$1,104,000**	
Biennium Total			$1,939,182	

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APPENDIX E

IT Impact on FTE

(Excerpt from "Legislative Branch Computer Network Funding Issues, Background on Legislative Branch Computer Use" by Robert B. Person, January 30, 1993)

Since automating a process allows work to be done much faster, it naturally follows that it should take fewer people to do the work. Authorizing agencies from corporate boards to legislatures thus ask how many people can be replaced if authority to buy machines is granted. This is a perfectly logical question, yet information processing professionals everywhere try to deflect the question when it arises. Why? Let's look at a couple of examples based on the experience of the Montana Legislature.

In 1967, the Legislature hired its first Fiscal Analyst. He had no central accounting system to use, much less an automated one. Much of his first year of employment was spent answering one question - how much money does the state spend on travel? Now, with a standardized statewide budgeting and accounting system residing on the mainframe computer, and sophisticated systems for extracting information, we have an Office of Fiscal Analysis. Clearly, the Fiscal Analyst can now perform more studies in a year than merely compiling the cost of state travel. Has automation played a role in staffing levels?

In 1972, the Legislature installed a program on the mainframe computer that would allow retrieval of statute text, storage of bill text on the computer, alteration of both statute and bill text, and control the printing of bills. Rules adopted in 1973 required bills to be processed by the system prior to introduction, or in a few instances, after introduction but before going to committee. In 1971, the current Senate taxation room was completely filled with engrossing and enrolling typists (approximately 25 to 30) who worked from early in the morning until late at night to type bill text. No error corrections were allowed, so an error anywhere on a page required complete

retyping. Upon installation of the computer system, the staff was reduced to 12, including those who originally typed the bills and those who typed the journals. In 1993, five people support a far larger number of bills and perform a number of additional duties as well. Fewer people do more work with far greater accuracy. The system enabled the legislature to make major changes in bills, yet have them back letter-perfect for consideration the next day. Maintenance of computing machinery and training of the people who use it are essential expenses of today's legislative process.

Dramatic changes in the number of people working in an area can occur in conjunction with increasing automation. Some of those changes may result from increased productivity, while others may result from increased work assignments regardless of productivity. It is generally recognized that automation has allowed vastly increased duties to be accomplished by office workers without a proportional increase in the number of people needed to do the work. That is why staff reductions are seldom a direct consequence of automating office work. It can only be said that each person working will produce more with higher quality in terms of completeness and accuracy than would otherwise be possible.

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120 copies of this public document were published at an estimated cost of $2.65 per copy, for a total cost of $318.00, which includes $318.00 for printing and $.00 for distribution.